



Submersible Sewage Pumps

Type DSC4

EBARA submersible pump type DSC4 is constructed of rugged cast iron with heavy-duty motor suitable for municipal water and wastewater, sewage and flood control applications.

FEATURES/BENEFITS

- **Heavy-duty, air-filled Class H and Class F insulated motor**
 - operates cooler with higher efficiency; enhances durability of operation.
- **Watertight cable entry system**
 - protects against moisture and capillary action; reduces maintenance cost.
- **Float type leakage detector**
 - provides early warning of mechanical seal failure; avoid costly motor repairs.
- **Self-cooling jacket**
 - high reliability, effectively dissipates heat; long operating life is expected
- **Cartridge type, duplex mechanical seal**
 - assembled in tandem arrangement; easy maintenance and high reliability.
- **High efficiency closed type impellers**
 - ability to pass larger solids with high outputs to prevent clogging; lowers operating cost.
 - ensure lower thrust load for longer bearing life.



SPECIFICATIONS

STANDARD SPECIFICATIONS			OPTION
Design	Capacity	2.3 to 43 m ³ /min	
	Total head	3.1 to 54m	
	Liquid temp.	0 to 40 °C	
	Max. submergence	35m	
Construction	Impeller	Close, non-clog	
	Shaft seal	Cartridge type duplex mechanical seals in tandem arrangement	
		Upper: Carbon/Ceramic	
		Lower: Silicon Carbide/Silicon Carbide	
	Bearing	Grease lubricated ball bearing	
	Driver	Air filled watertight electric motor with cooling jacket	
		Starting method: D.O.L. / Star Delta (37-110kW), D.O.L. / Reduce Voltage (132-185kW)	
	Mounting method	Quick discharge connector (QDC) with guide pipes for wet pit installation	
Accessories		10m watertight rubber insulated flexible cable	Temp. detector for Thrust bearing
		Built-in winding temp. detectors for each phase	
		Built-in float type leakage detector	
Codes & Standards		JIS, JEC*	

* JIS : Japanese Industrial Standard

JEC : Japanese Electro Technical Committee

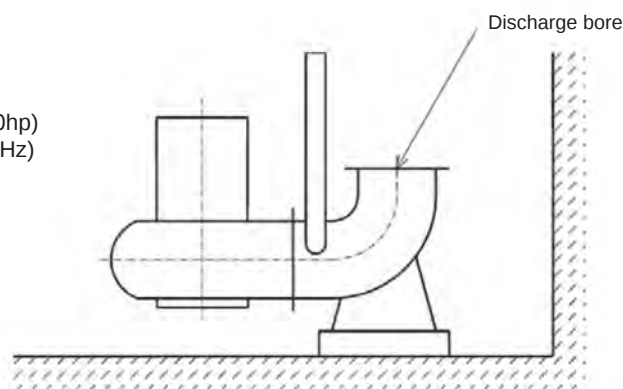
MATERIALS OF CONSTRUCTION

PARTS	MATERIAL
Pump casing	Cast iron, JIS FC250, equiv. to ASTM A48 CL35
Impeller	Cast iron, JIS FC250, equiv. to ASTM A48 CL35
Shaft	Stainless Steel, 1Cr12, equiv. to AISI 403Q
Casing ring	Stainless Steel, JIS SUS420, equiv. to AISI 420
Motor frame	Cast iron, JIS FC250, equiv. to ASTM A48 CL35
Cooling jacket	Rolled steel, JIS SS400, equiv. to ASTM A283 Gr.D
Mechanical seal	Upper : Carbon/Ceramic, Lower : Silicon Carbide/Silicon Carbide

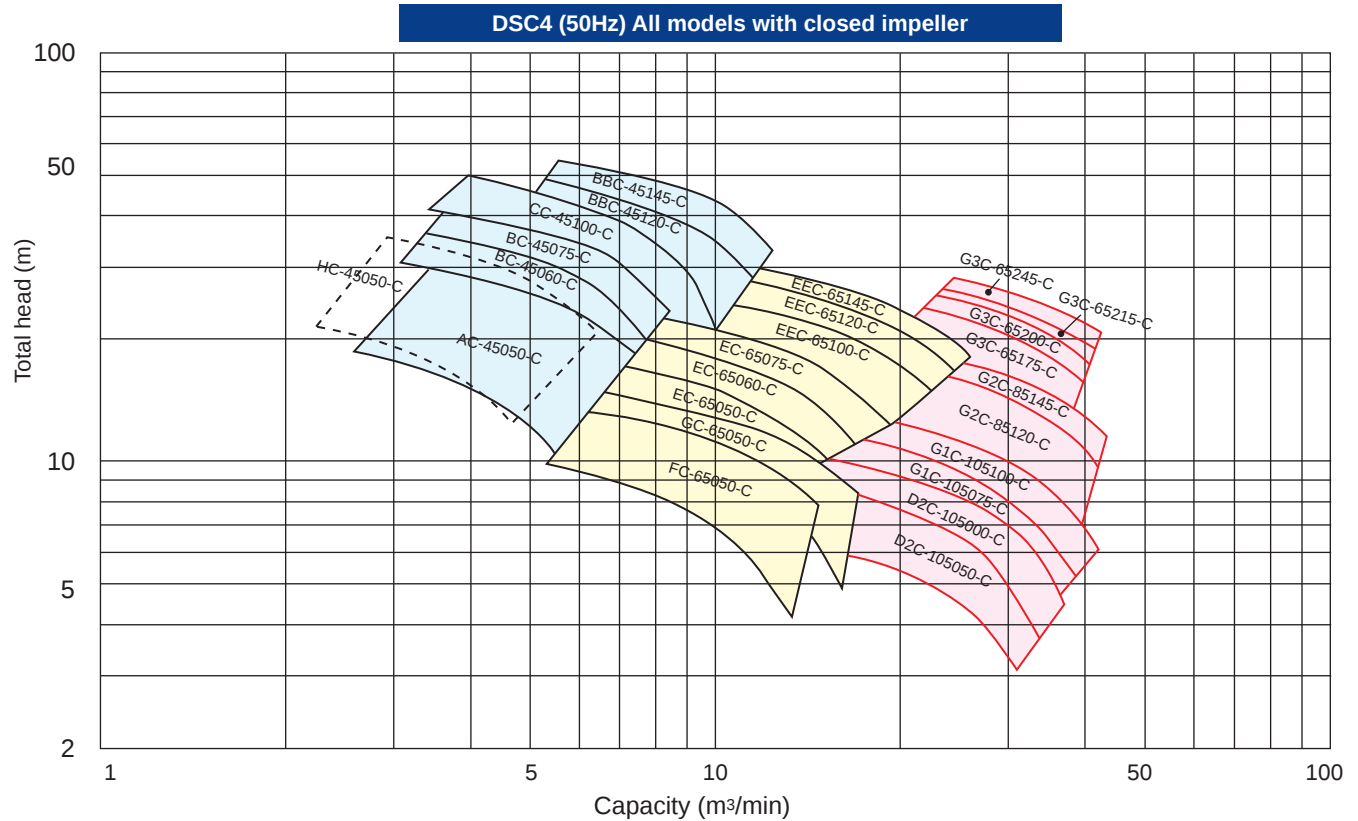
PUMP MODEL
 MODEL CODE
 HYDRO MODEL
 IMPELLER TYPE
 [Close: C]

150DSC4
AC - 45050

Discharge Bore Size (mm)
 Motor Output (50hp)
 Frequency (5:50Hz)
 Pole



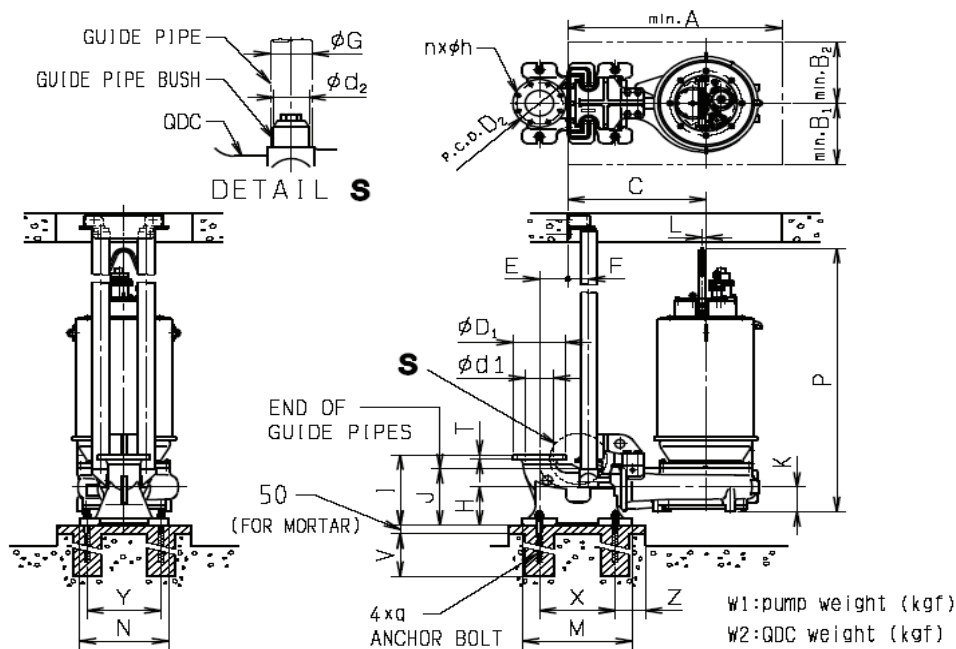
PERFORMANCE CHART



PUMP TYPE

Pump Model	Model Code	Motor Rating		Type of Impeller	Nos. of Blades	Insulation class
		KW	HP			
150DSC4	HC-45050-C	37	50	Close, non-clog	2	F
	AC-45050-C	37	50			
	BC-45060-C	45	60			H
	BC-45075-C	55	75			
	CC-45100-C	75	100			
	BBC-45120-C	90	120			
	BBC-45145-C	110	145			
250DSC4	EC-65050-C	37	50		3	F
	EC-65060-C	45	60			
	EC-65075-C	55	75			
300DSC4	FC-65050-C	37	50			H
	GC-65050-C	37	50			
	EEC-65100-C	75	100			
	EEC-65120-C	90	120			
	EEC-65145-C	110	145			
500DSC4	D2C-105050-C	37	50			
	D2C-105060-C	45	60			
	G1C-105075-C	55	75			
	G1C-105100-C	75	100			
	G2C-85120-C	90	120			
	G2C-85145-C	110	145			
	G3C-65175-C	132	175			
	G3C-65200-C	150	200			
	G3C-65215-C	160	215			
	G3C-65245-C	185	245			

DIMENSION AND WEIGHT (50Hz)

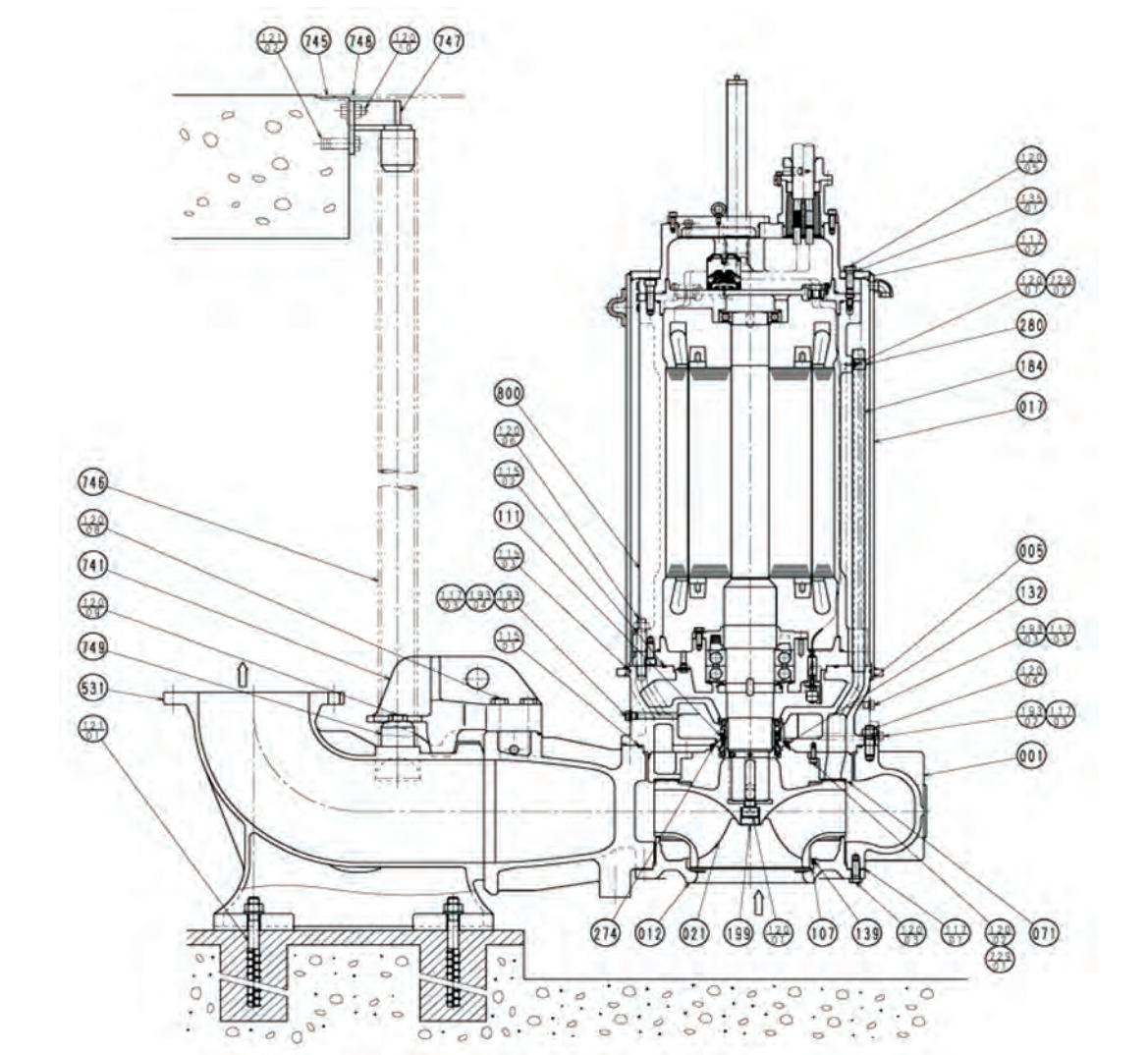


Pump Model	Model Code	(kW)	d1	A	B1	B2	C	D	F	G	H	I	J	K	L	M	N	P
150DSC4	HC-45050-C	37	150	1130	360	360	730	150	110	89.1	225	415	333	145	20	580	470	1511
	AC-45050-C	37	150	1130	360	360	730	150	110	89.1	225	415	333	145	20	580	470	1491
	BC-45060-C	45	150	1130	360	360	730	150	110	89.1	225	415	333	145	20	580	470	1571
	BC-45075-C	55	150	1130	360	360	730	150	110	89.1	225	415	333	145	20	580	470	1631
	CC-45100-C	75	150	1220	400	360	780	150	110	89.1	225	415	333	145	20	580	470	1713
	BBC-45120-C	90	150	1200	380	380	800	150	110	89.1	225	415	333	160	30	580	470	1787
250DSC4	BBC-45145-C	110	150	1200	380	380	800	150	110	89.1	225	415	333	160	30	580	470	1847
	EC-65050-C	37	250	1410	490	390	905	215	110	89.1	290	580	448	210	20	630	550	1666
	EC-65060-C	45	250	1410	490	390	905	215	110	89.1	290	580	448	210	20	630	550	1726
300DSC4	EC-65075-C	55	250	1410	490	390	905	215	110	89.1	290	580	448	210	30	630	550	1903
	FC-65050-C	37	300	1350	450	350	875	260	110	89.1	330	660	503	250	20	680	570	1686
	GC-65050-C	37	300	1390	470	380	890	260	110	89.1	330	660	503	250	20	680	570	1686
	EEC-65100-C	75	300	1510	540	430	960	260	110	89.1	330	660	503	250	30	680	570	1882
	EEC-65120-C	90	300	1510	540	430	960	260	110	89.1	330	660	503	250	30	680	570	1942
500DSC4	EEC-65145-C	110	300	1510	540	430	960	260	110	89.1	330	660	503	250	30	680	570	2022
	D2C-105050-C	37	500	1810	640	500	1230	390	140	114.3	500	1000	790	360	30	990	730	1972
	D2C-105060-C	45	500	1810	640	500	1230	390	140	114.3	500	1000	790	360	30	990	730	2082
	G1C-105075-C	55	500	2030	730	570	1305	390	140	114.3	500	1000	790	360	30	990	730	2167
	G1C-105100-C	75	500	2030	730	570	1305	390	140	114.3	500	1000	790	360	30	990	730	2204
	G2C-85120-C	90	500	2000	700	550	1285	390	140	114.3	500	1000	790	360	30	990	730	2204
	G2C-85145-C	110	500	2000	700	550	1285	390	140	114.3	500	1000	790	360	30	990	730	2274
	G3C-65175-C	132	500	1900	660	520	1230	390	140	114.3	500	1000	790	360	30	990	730	2269
	G3C-65200-C	150	500	1900	660	520	1230	390	140	114.3	500	1000	790	360	30	990	730	2409
	G3C-65215-C	160	500	1900	660	520	1230	390	140	114.3	500	1000	790	360	30	990	730	2409
	G3C-65245-C	185	500	1900	660	520	1230	390	140	114.3	500	1000	790	360	30	990	730	2469

Pump Model	Model Code	V	X	Y	Z	q	d2	W1	W2	Discharge Flange of QDC					
										D1	D2	T	n	h	
150DSC4	HC-45050-C	450	400	390	160	M24	75	840	110	279.4	241.3	25.4	8	23	
	AC-45050-C	450	400	390	160	M24	75	800	110	279.4	241.3	25.4	8	23	
	BC-45060-C	450	400	390	160	M24	75	880	110	279.4	241.3	25.4	8	23	
	BC-45075-C	450	400	390	160	M24	75	920	110	279.4	241.3	25.4	8	23	
	CC-45100-C	450	400	390	160	M24	75	1080	110	279.4	241.3	25.4	8	23	
	BBC-45120-C	450	400	390	160	M24	75	1310	110	279.4	241.3	25.4	8	23	
250DSC4	BBC-45145-C	450	400	390	160	M24	75	1350	110	279.4	241.3	25.4	8	23	
	EC-65050-C	450	450	470	160	M24	75	1030	170	406.4	362	30.3	12	26	
	EC-65060-C	450	450	470	160	M24	75	1070	170	406.4	362	30.3	12	26	
300DSC4	EC-65075-C	450	450	470	160	M24	75	1270	170	406.4	362	30.3	12	26	
	FC-65050-C	450	500	490	160	M24	75	1020	230	482.6	431.8	31.8	12	26	
	GC-65050-C	450	500	490	160	M24	75	1020	230	482.6	431.8	31.8	12	26	
500DSC4	EEC-65100-C	450	500	490	160	M24	75	1570	230	482.6	431.8	31.8	12	26	
	EEC-65120-C	450	500	490	160	M24	75	1640	230	482.6	431.8	31.8	12	26	
	EEC-65145-C	450	500	490	160	M24	75	1720	230	482.6	431.8	31.8	12	26	
	D2C-105050-C	450	750	650	200	M24	99	1940	890	699	635	43	20	32	
	D2C-105060-C	450	750	650	200	M24	99	2040	890	699	635	43	20	32	
	G1C-105075-C	450	750	650	200	M24	99	2420	890	699	635	43	20	32	
	G1C-105100-C	450	750	650	200	M24	99	2745	890	699	635	43	20	32	
	G2C-85120-C	450	750	650	200	M24	99	2710	890	699	635	43	20	32	
	G2C-85145-C	450	750	650	200	M24	99	2840	890	699	635	43	20	32	
	G3C-65175-C	450	750	650	200	M24	99	2660	890	699	635	43	20	32	
	G3C-65200-C	450	750	650	200	M24	99	2830	890	699	635	43	20	32	
	G3C-65215-C	450	750	650	200	M24	99	2840	890	699	635	43	20	32	
	G3C-65245-C	450	750	650	200	M24	99	3010	890	699	635	43	20	32	

Units:
mm unless otherwise specified

SECTIONAL VIEW



No.	Parts Name	Material	Qty
120-10	Holder Bolt	SUS304	2
120-09	Hex.head Bolt	SUS304	2
120-08	Hex.head Bolt	SUS304	4
120-07	Hex.head Bolt	SUS304	1 Set
120-06	Stud Bolt/nut	SUS304	1 Set
120-05	Hex.head Bolt	SUS304	1 Set
120-04	Stud Bolt/nut	SUS304	1 Set
120-03	Hex.head Bolt	SUS304	1 Set
120-02	Hex.socket Cap Screw	SUS304	1 Set
120-01	Impeller Bolt	SUS403	1
117-03	Sheet Gasket	-	4
117-02	Sheet Gasket	NBR	1
117-01	Sheet Gasket or O Ring	-	1
115-03	O Ring	NBR	1
115-02	O Ring	NBR	1
115-01	O Ring	NBR	1
111	Mechanical	-	1 Set
107	Casing Ring	SUS420	1
071	Side Plate	FC250	1
021	Impeller	FC250	1
017	Cooling Jacket	SS400	1
012	Suction Cover	FC250	1
005	Intermediate Casing	FC250	1
001	Pump Casing	FC250	1

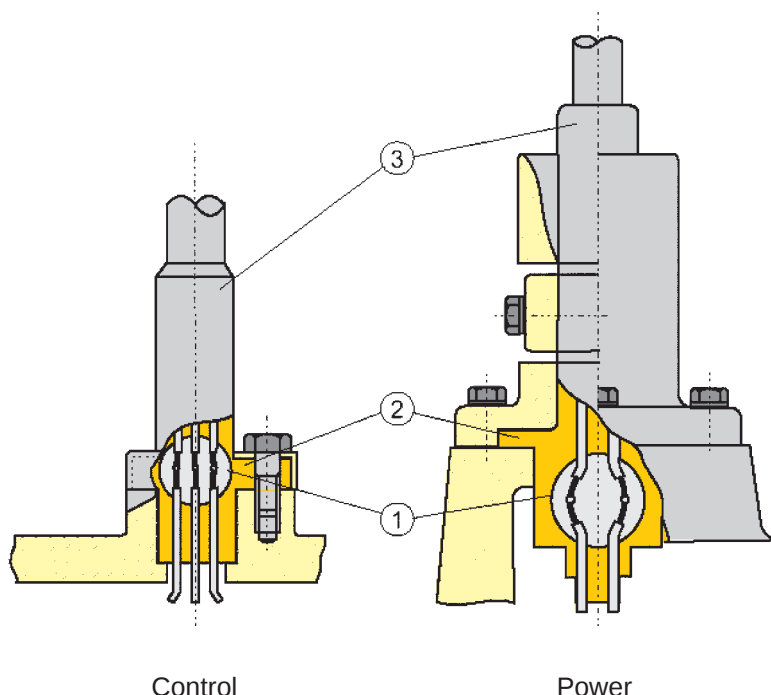
No.	Parts Name	Material	Qty
800	Motor	-	1 set
749	Guide Pipe Bush	SUS420	2
748	Floor Plate	SS400	1
747	Guide Pipe Holder	SS400	1
746	Guide Pipe	SUS304	2
745	Floor Frame	SS400	1
741	Sliding Guide	FCD400	1
729-02	Spring Washer	SUS304	1 set
729-01	Spring Washer	SUS304	1 set
531	Quick Discharge Connector	FC250	1
280	Pipe Clamp	SUS304	1 set
274	Snap Ring	SUS304	1
199	Impeller Bolt Cap	SUS304	1
193-04	Plug(Air Vent)	SUS304	1
193-03	Plug(Leak Check)	SUS304	1
193-02	Plug(Oil Drain)	SUS304	1
193-01	Plug(Oil Port)	SUS304	1
184	Cooling Water Pipe	SGP	1 set
139	Spring Pin	SUS304	1 set
135-01	Seal Washer	SUS304/NBR	1 set
132	Parallel Pin	SUS420	2
121-02	Hole-in Anchor	SUS304	2
121-01	Anchor Bolt	SUS304	4

WATER TIGHT CABLE ENTRY SYSTEM

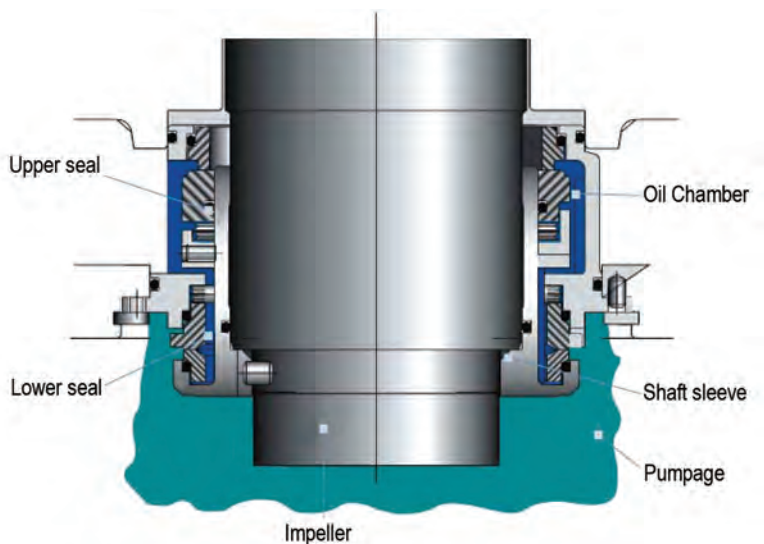
The design of the cable entry is critical to prevent the ingress of water into the motor. Thus EBARA is adopting a unique water-tight cable entry system that ensure long-lasting and trouble-free pumping operation.

How it works :

- ① Water cannot leak into the motor even if the cable is cut or damaged. Each cable lead is soldered then isolated by rubber sealing, thus preventing any capillary action.
- ② Thick molded shoulders bolted to motor cap provides exceptional strength and forms a strong compression seal.
- ③ Increased diameter of cable with molded entry resists strain from bending.



DOUBLE MECHANICAL SEAL DETAIL



- Upper seal O rings - NBR
- Upper seal faces - Carbon vs Ceramic
- Lower seal O rings - Viton
- Lower seal faces - Silicon carbide vs Silicon carbide
- Seal springs - 304SS
- Shaft sleeve - 304SS

* Optional seal face materials available

* Dimensional details are provided for reference only.
* All specifications are subject to change without prior notice.



EBARA Pumps Malaysia Sdn Bhd
6, Jalan TP3, UEP Subang Jaya Industrial Park,
47620 Subang Jaya, Selangor, Malaysia.
Tel : 03-8023 6622 Fax : 03-8023 9355
Email : sales@ebara.com.my
Website : www.ebara.com.my



Authorised dealer: